

Notes 9/11 - Simplifying Expressions

Like terms - have the same variables to the same powers

Ex: Are the following like terms?

$$3x^2, x^2$$

yes

$$8x^2, 8x$$

no

$$x^2y, xy^2$$

no

- Be careful when subtracting a quantity
→ distribute the negative!

Ex: $(3x^2 + 2x - 5) - 1(x^2 + 3x - 4)$

$$\begin{array}{r} 3x^2 + 2x - 5 \\ -x^2 - 3x + 4 \end{array}$$

$$\boxed{2x^2 - x - 1}$$

- When adding fractions, Make sure you have a common denominator

Ex: $3\left(\frac{x+1}{2}\right) + 2\left(\frac{x}{3}\right)$

$$\frac{3x+3}{6} + \frac{2x}{6} = \boxed{\frac{5x+3}{6}}$$

- When distributing a variable, exponents may change

Ex: $3a(2a^3 + 4b)$

$$\boxed{6a^4 + 12ab}$$